

$1/3$ 

MGSNRGRKAGGGSQDFGAGLKYSRLNMGFEEGVEFLPANNA  
KKVEKRGRRRVVLVAVLFSLLLSLMAGLLVWHPHYRNRVRVQKVFNGHLRITNEIFL  
DAYENSTSTEFISLASQVEALKLLYNEVPVLGPHYKKSAVTASEGSVIAYYWEFS  
IPPHLAEVDRMAMAVERVTLPPRARALKSFLVTSVVAFPIDPRLMQRTQDNCSCFAL  
HAHGAAVTRFTTTPGFNPSPYPAHARCQWVLRGDADSVLSLTFRSFDVAPCDEHGSDLV  
TVYDSLSPMEHAAVQRLCGTFSPSYNLTLFSSQNVFLVTLITNTDRRHGFPEATFFQFL  
PKMSSCGGFLSDTQGTFFSPYPYPGHYPNNINCKITWNKIVPNNRNVKVRFKFLYLVDPNV  
PVGSCTKDYVEINGEKYCGERSQCFVVSNSNKITVHFSDHSYTDGFLAEYLSYDSN  
DPCPGMFMCKTGRCIRKELRCDGWADCPDYSDERYCRCNATHQFTCKNQFCKPLFWVC  
DSVNDYCDGSDGEBCSCPAGSFKCSNGKCLPQSQCKNGKDCNGCDSEADSCSVNVVS  
CTKYTYRCQNGLCLSKGNPECDKGTDSCSDSEKNCDCGLRSFTKQARVVGGTNADEG  
EWPWQVSLHALGGHLCGASLISPDWLVSAAHCFQDDKNFKYSYDTMTWATFLGLLDQS  
KRSASGVQELKLKRIITHPSFNDFTFDYDIALLELEKSVEYSTVVRPICLPDATHVFP  
AGKAIWVTGWGHTKEGGTGALILQKGEIRVINQTTCEDLMPQQITPRMMCVGFPSGGV  
DSCQDGGPLSSAEKDRGMFQAGVVSWEGCAQRNKGPGVYTRLPVVRDWIKEHTGV  
(SEQ ID NO:2)

### FIGURE 1

APPROVED	D.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

2/3



underlined = deleted in targeting construct

[ ] = sequence flanking Neo insert in targeting construct

CATGGTAGACGGCTGCCCGGAGGGACCACGCTCTGAGACCGGCGATCGGACCGCCAAAA  
CCATGGGTAGCAATCGGGGCCGCAAGGCCGGAGGGGGCTCTCAGGACTTCGGCGCGGGAC  
TCAAGTACAACCTCCCGGCTAGAGAACATGAATGGCTTTGAGGAGGGTGTGGAGTTCTCGC  
CTGCGAACAATGCCAAGAAAGTGGAGAAGCGAGGCCCCAGGCGCTGGGTGGTGGTGG  
CAGTGCTGTTACGTTCTCTTGTCTCCCTCATGGCTGGCTTGTGGTGTGGCACTTCC  
ATTATCGGAATGTGCGGGTTCAAAAAGTCTTCAATGGCCATCTGAGGATCACAAATGAGA  
TCTTTCTGGATGCGTATGAGAACTCCACCTCCACAGAGTTTATCAGCCTGGCCAGCCAGG  
TGAAGGAGGCGCTGAAGCTGCTGTACAATGAAGTCCCTGTCTGGGTCCCTACCACAAGA  
AGTCGGCTGTAACCTGCCCTTCAGTGAGGGCAGTGTATCGCCTACTACTGGTCAGAGTTCA  
GCATGCCCCCAGACCTGGCAGAAAGAGTTGATCGCGCCATGGCTGTGGAGCGAGTTGTAA  
CATTGCCACCCCGAGCACGGGCACTGAAATCCTTCGTGCTAACATCTGTGGTGGCCTTCC  
CCATTGACCCCGAATGCTGCAGAGGACTCAGGACAACAGCTGCAGTTTGGCCCTGCATG  
CCCATGGTGCAGCAGTGACACGCTTCACTACCCCTGGCTTCCCCAACAGTCCCTACCCGG  
CGCATGCCCGCTGCCAGTGGGTCTTGGCGGGGGACGCCGACTCTGTGCTGAGCCTCACCT  
TCCGAAGCTTTGATGTGCTCCCTGTGATGAGCATGGCAGTGACCTGGTCACCGTGTATG  
ATAGCCTGAGCCCCATGGAACCCACGCTGTGGTGGCGGTGTGTGGCACCCTTCTCACCCCT  
CCTACAACCTGACTTTCTCTCCCTCCAGAACGCTCTTCTTGTACGCTGATAACCAATA  
CTGACCGCGGACATCTTGGCTTTGAGGGCACTTTCTTCCAGCTGCCCAAGATGAGCAGCT  
GTGGCGGCTTTTGTAGTGACACCCAAGGGACATTTAGCAGCCCCTACTATCCAGGCCACT  
ACCCGCCCAACATCAACTGCACATGGAATATCAAGGTGCCCAACAAACGGAAAGTGAAGG  
TGCGCTTCAAACTCTTCTATCTGGTGGACCCCAACGTACCAGTGGGCTCCCTGACCAAGG  
ACTATGTGGAGATCAACGGGGAGAACTACTGCGGTGAGAGGTCCAGTTTGTGGTGAACA  
GCAACAGCAGCAAGATTACAGTCCACTTCCATTCTGATCACTCGTACACGGACACCGGGT  
TCCTAGCTGAGTACCTCTCTTACGACTCCAACGACCCGTGCCAGGGATGTTTATGTGCA  
AGACTGGACGGTGCATCCGAAAGGAACCTGCGCTGCGACGGCTGGGCAGACTGCCCGGATT  
ATAGTGATGAGCGTTACTGCCGATGCAATGCCACCCACAGTTTACGTTGCAAAAACAGT  
TCTGCAAGCCCCCTTCTTGGGTCTGTGACAGTGTCAACGACTGTGGGGACGGAAGTGACG  
AGGAGGGCTGCAGCTGTCTTGTGGGAGTTTCAAGTGTTCGAATGGGAAGTGTCTCCCTC  
AGAGCCAGAAGTGTAAATGGGAAGGACAACCTGTGGAGATGGGTCTGACGAGGCTTCAAGT  
ACAGCGTGAAATGTCGTCTCTTGCACCAAAATATACCTACCCTGCCAAAATGGCCCTGTCT  
TGAGCAAGGGCAACCCGTAGTGTGATGGGAAGACGGACTGTAGCGATGGCTCCGATGAGA  
AAAACGTGACTGTGGGCTGCGATCTTTACCAAAACAGGCTCGCGTGGTTGGTGGCACGA  
ATGCGGACGAGGGCGAGTGGCCCTGGCAGGTGAGCTTCCACGCCCTGGGCCAGGGCCACT  
TGTGTGGGGCTCGCTCATCTCTCTGACTGGCTGGTCTCTGCAGCTCATTTGCTTTTACGG  
ATGACAAAAAATTTCAAGTACTCAGACTACACGATGTGGACGGCCTTCTGGGTCTGTCTGG  
ACCAGAGCAAGCGCAGTGCCCTCTGGGGTGCAGGAGCTGAAGCTCAAACGTATCATCACCC  
ACCTTCTCTTCAATGATTTTACCTTCGACTATGACATCGCCTTGCTGGAGCTGGAGAAGT  
CGGTGGAGTACAGCACCGTCTGTGCGCCCCATCTGCCCTGCCTGATGCTACCCATGTCTTCC  
CTGCTGGCAAGGCCATCTGGGTACAGGCTGGGGGCACACAAAAGAGGGAG [GTACCGGA  
GCGCTGATCTTGCAGAAGGGTGAGATCCGTGTCAATCAACAGACCACCTGTGAGGACCTC  
ATGCCGACGAGATCACCCACGAATGATGTGTGGGTTCCTCAGTGGGGGTGTGGAC  
TCTTGC] CAGGGTGACTCTGGTGGCCCCCTTGTCAAGCGCGGAGAAAG [ATGGGCGAATGT  
TCCAGGCTGGTGTGGTGGAGTGGGGTGAAGGTGCGCTCAGAGGAACAAGCCAGGCGTGT  
ACACAAGGCTCCCTGTAGTTCTGGGACTGGATCAAAGAGCACACTGGGGTATAGCAGCATG  
GACAGACAGCCGACCACAAAACACCCACAGGGATGCCCACATGCACACCTGGATACAGGA  
GAGGAACACTGACGACATTTATGCTGTGGCTCCCCCCCCCAACACAACCCAGACTGTGA  
ACTGCATCTTTAGGACTCAGAGTTCTTCCAAAGTGGGACCCCTCAAGAGTTGGAGAGAG  
AATCTGCGTGCTAGCGGCCAGCTGGGGGCAAGGGTTTGTATGGCAGCCTTCCCCCTCTA  
GCCCTGAGCTGGGTGAAGATGATGCTGTCCCGAGAGCTGCTTCCAACTGTCTATTGAGCT  
CCCGGGAGCCCCATGGGAGGAGGGGCTCAGGGTCACTCTTTTTCAGGAAGCGCCAGCCCTA  
GGAACCCAGAAAAGAGTGGTACCTAAGGCTGAAAT] TGTTTTGCTGTTGCCAGGGGTGG  
GTATTTGAGAGTAAAACATTTTATTTCTTTTAAAAA

FIGURE 2A



## Gene Sequence Structure

2466 bp

Sequence Deleted

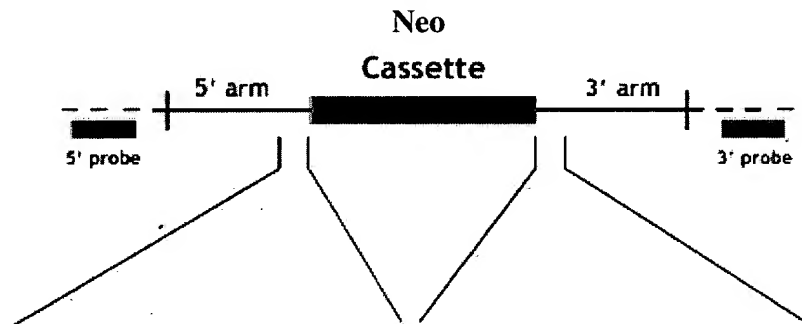
2505 bp

Size of full-length  
cDNA: 3106 bp

Targeting Vector\*  
(genomic sequence)

Construct Number: 2035

Arm Length:  
5': 3.8 kb  
3': 1 kb



———— Targeting Vector  
----- Endogenous Locus

\* Not drawn to scale

5' > TTCCCCATTGAGACTGGCTTA  
CCCCGGAAGCTGCCTGCCTCAGTC  
TCCCGCTTCCTGTCTCCCCAGGTA  
CCGGAGCGCTGATCCTGCAGAAGG  
GTGAGATCCGTGTCATCAACCAGA  
CCACCTGTGAGGACCTCATGCCGC  
AGCAGATCACCCACGAATGATGT  
GTGTGGGTTTCCTCAGTGGGGGTG  
TGGACTCCTGC < 3'  
(SEQ ID NO: 3)

5' > ATGGGCGAATGTTCCAGGCTG  
GTGTGGTGGGCTGGGGTGAAGGCT  
GCGCTCAGAGGAACAAGCCAGGCG  
TGTACACAAGGCTCCCTGTAGTTC  
GGGACTGGATCAAAGAGCACACTG  
GGGTATAGCAGCATGGACAGACAG  
CCGACCACAAACACCCACAGGGAT  
GCCCGACATGCACACCTGGATACA  
GGAGAGGGACA < 3'  
(SEQ ID NO: 4)

FIGURE 2B